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경영학석사학위논문

The Effect of Real Earnings Management on Tax Avoidance

조세회피와 실제영업활동을 통한 이익조정

2017 년 2 월

서울대학교 대학원

경영학과 회계학전공

이정은

The Effect of Real Earnings Management on Tax Avoidance

지도교수 정 운 오

이 논문을 경영학석사학위논문으로 제출함

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ABSTRACT

The Effect of Real Earnings Management on Tax Avoidance

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In line with the literature on several determinants of tax avoidance, this paper considers the impact of real earnings management on tax avoidance. Under the circumstances of divergent reporting incentives in tax and financial accounting purposes, firms may properly exploit discretionary accruals and tax subsidy for dual goals. On the other hand, firms that engage in real earnings management have relatively little chance to achieve it, and thus would have stronger motivation to seek for aggressive tax planning. In addition, firms that engage more in real earnings management are safer from regulator scrutiny relative to accrual management, which leads firm to be less sensitive to the risks of tax avoidance. Given greater motivation and favorable circumstances for tax avoidance, firms that engage more in real earnings management are expected to seek for more aggressive tax planning. Results from OLS regression support the prediction, and the impact of real earnings management on tax avoidance remains unchanged after controlling for the discretionary accruals.

Keywords: tax avoidance, real earnings management, accrual management, effective tax rates

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I. INTRODUCTION

Much of the research on tax avoidance has focused on individual taxpayers, and the research on corporate taxpayers is recently being studied vigorously. For example, capital structure (Wilson and Ryan 2009), litigation losses (Lisowsky 2010), family firms (Chen et al. 2010), business strategy (Higgins et al. 2015) were examined to be a firm-level characteristics of tax avoidance. This paper tries to extend literature on the determinants of tax avoidance.

A number of studies discuss the possibility of managerial intervention in the reporting process in two different ways. That is, managerial intervention via accounting estimates and methods (i.e., accrual management) and through operational decisions (i.e., real earnings management). So far much of the research on tax avoidance has considered accrual management in the research. For example, abnormal book-tax difference, a novel measure of tax avoidance devised in Desai and Dharmapala (2006, 2009), includes total accruals to control for accounting earnings management. However, research considering the relation between real earnings management and tax avoidance has limited. In this paper I consider real earnings management as a determinant of tax avoidance with several features it has compared to accrual management.

Under the circumstances of divergent reporting incentives in tax and financial accounting purposes, firms may properly exploit discretionary accruals to meet the dual reporting goals. (Kim et al. 2002). However, most of real earnings management is classified into Book-Tax Conforming earnings management, which increases both financial (i.e., book) and taxable incomes and thus has current income tax consequences. Thus, firms that engage in real earnings management have relatively little chance to

achieve dual reporting goals or income shifting behavior and thus would have stronger motivation to seek for actual tax planning.

Secondly, firms that engage in real earnings management face more favorable circumstances for tax avoidance. Tax avoidance entails several risks such as paying additional taxes and penalties or triggering tax investigation (Hanlon and Heitzman, 2010). Thus, firms that are less sensitive to these risks of tax avoidance will be more likely to engage in aggressive tax planning.

When we shift our attention to the features of accrual management, accrual manipulation is more likely to draw auditor or regulator scrutiny than real decisions about pricing and production (Roychowdhury 2006). Also, according to Dechow et al. 1996, no action was initiated because of pricing or production decisions, or decisions on discretionary expenses in the list of SEC enforcement actions alleging earnings overstatements. In other words, REM is relatively safe from regulator scrutiny and thus from tax investigation. Consequently, firms that rely more on real earnings management rather than on accrual management are less sensitive to the risks of tax avoidance and thus more likely to engage in aggressive tax planning.

Given greater motivation and favorable circumstances for tax avoidance, I expect to see that firms that engage more in real earnings management seek for actual tax planning aggressively. In this study I empirically investigates the following two research questions: (1) Do firms that engage more in real earnings management show aggressive tax planning? (2) Will the influence of real earnings management on tax avoidance last after holding accrual management constant?

Following several prior literature on the determinants of tax avoidance, I employ effective tax rate (ETR) to capture tax avoidance. Though ETRs are usually measured as tax liability divided by income, there is considerable controversy regarding the appropriate definition of both the numerator and denominator (Gupta and Newberry 1997). In this paper, in addition to the most renowned measure of GAAP ETR (hereafter, GETR), I employ current ETR (hereafter, CETR) which consider the temporary difference part from GAAP ETR.

I estimated OLS regression to examine two hypotheses. The results support my predictions by showing negative coefficient on real earnings management, implying that firms engaged in real earnings management show significantly low effective tax rate. In addition, the sign of estimated coefficient on real earnings management remains unchanged after controlling for the discretionary accruals. This result support that the influence of real earnings management on tax avoidance lasts when holding accrual management constant, which strengthen the impact of real earnings management on tax avoidance.

The findings of this paper collectively contribute to existing accounting literature in several ways. First of all, it can provide theoretical rationales for why firms that engage more in real earnings management seek for tax avoidance in several aspects. Specifically, firms that engage more in real earnings management have greater motivation and favorable circumstances toward tax avoidance, so that those firms are expected to seek for more aggressive tax planning.

Secondly, to my knowledge, this paper is the first to examine the relation between real earnings management and tax avoidance. Accrual management has been considered

in the literatures on tax avoidance, but another earnings management methods of real earnings management has not been focused. Thus, this paper can contribute to literature on the determinants of tax avoidance by suggesting REM as a shelter firm characteristic.

The rest of this paper consists of the following sections. Section II contains prior literature review and hypothesis development. Section III provides explanation on sample selection procedures and empirical models used in this paper. Section IV presents the results of empirical tests. Section V concludes the study.

II. Prior Literature and Hypotheses development

2.1 Comparison between REM and AM

Healy and Wahlen (1999) defines earnings management as managers using judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting practices. Several studies discuss the possibility that managerial intervention in the reporting process can occur in two ways: via accrual management, or through real earnings management. Accrual management contains managerial intervention in accounting estimates and methods. On the other hand, Roychowdhury(2006) defines real activities manipulation as departures from normal operational practices, motivated by managers' desire to mislead at least some stakeholders into believing certain financial reporting goals have been met in the normal course of operations.

The first distinctive feature of real earnings management that this study focuses on lies in book-tax conformation. According to Badertscher et al. (2009), earnings management can be classified into the categories of book tax conforming earnings management (hereafter BT Conforming EM) and non-conforming earnings management (hereafter BT Non-conforming EM). BT Conforming EM increases both financial (i.e., book) and taxable incomes and thus has current income tax consequences. This includes any transaction that has same impact on the current period's book and taxable incomes. For example, accelerating revenue recognition through channel stuffing, recording receivables sooner than justified, altering the timing of inventory, or purchases under LIFO.

On the other hand, BT Non-conforming EM increases book income but has no current tax consequences. This includes transactions that accelerate revenue recognition or defer expense recognition for financial reporting purposes, relative to tax purposes. That is, while accrual management can both fall into the categories of BT conforming EM and BT Non-conforming EM most of REM activities are classified into BT Conforming EM.

The second notable feature of real earnings management lies in the risk of detection. As one of earnings management methods, real earnings management is safer from the detection risk than accrual management. Several prior literatures show grounds for this feature. According to Roychowdhury (2006), accrual manipulation is more likely to draw auditor or regulator scrutiny than real decisions about pricing and production. In addition, Dechow Sloan and Sweeney (1996) investigate SEC enforcement actions alleging earnings overstatements. They do not list any action being initiated because of

pricing or production decisions, or decisions on discretionary expenses. Although revenue recognition practices account for 40% of the SEC actions in their sample, it is unclear whether any of the actions were initiated because of allegations of channel-stuffing.

2.2 Hypotheses development

Firms face divergent reporting incentives in tax and financial accounting purposes. They have incentive to optimize financial accounting numbers to maximize firm value yet this entails burden of tax costs. According to Kim et al. 2002, to deal with this matter, firms can properly exploit discretionary accruals and tax subsidy to meet dual reporting goals. However, as I stated in the previous section, most of real earnings management is classified into BT Conforming earnings management, which increases both financial and taxable incomes and thus has current income tax consequences. Thus, firms that engage in real earnings management have relatively little chance to achieve dual reporting goals or income shifting behavior and thus would have stronger motivation to seek for aggressive tax planning.

Moreover, tax avoidance entails several risks such as paying additional taxes and penalties or triggering tax investigation (Hanlon and Heitzman, 2010). Thus, firms that are less sensitive to these risks of tax avoidance will be more likely to engage in aggressive tax planning. When we shift our attention to the related feature of earnings management, Accrual manipulation is more likely to draw auditor or regulator scrutiny than real decisions about pricing and production (Roychowdhury 2006). In other words, REM is relatively safe from regulator scrutiny and thus from tax investigation.

Consequently, Firms that rely more on real earnings management are less sensitive to the risks of tax avoidance and thus more likely to engage in aggressive tax planning.

Given greater motivation and favorable circumstances for tax avoidance, I expect that firms that engage more in real earnings management seek for more aggressive tax planning. I raised hypothesis 1.

Hypothesis 1: Firms that engage more in real earnings management show more aggressive tax planning

There has been several discussion on the relation between the level of accrual management and that of real earnings management. For example, Park 2012 found that managers adjust the financial number upward simultaneously with the level of real earnings management. In other words, positive relation between the degree of AM and REM was shown in the period of earnings management. Since AM is more likely to draw auditor or regulator scrutiny, empirical tests after controlling for discretionary accruals would strengthen hypothesis 1. I raised second hypothesis as follows.

Hypothesis 2: The influence of real earnings management on tax avoidance lasts after holding accrual management constant

III. Sample and Research Design

3.1. Sample

I sample all firms in COMPUSTAT between 1997 through 2014 with sufficient data available to calculate the variables in Appendix for every firm-year. Top statutory rate in the United States had not been changed during the sample period. I deleted firms in regulated industries, banks and financial institution. After collecting data on operating firms, I winsorized outliers of the extreme 5% value for main variables. This process leaves a sample of 92,342 firm-year observations.

According to Gupta and Newberry(1997), there is considerable measurement issue regarding ETRs for the firms with negative income or tax refund since their ETRs are distorted in certain situations. Thus, following Gupta and Newberry(1997), I set the ETR: 1) to zero for firms with tax refunds; and 2) to 100% for firms with positive taxes and negative (or zero) income or cash flow. I also constrained the ETR of my sample firms to lie between 0 and 1. After creating several variables used in this study, the number of observations used in main OLS regression model reduced to 18,643.

3.2. Research Design

Following several prior literature on determinants of tax avoidance, I use effective tax rate (ETR) to capture tax avoidance. Although ETRs are usually measured as tax liability divided by income, there is considerable controversy regarding the appropriate definition of both the numerator and denominator (Gupta and Newberry 1997). In addition to the most renowned measure of GAAP ETR (hereafter, GETR), I employ current ETR (hereafter, CETR), which consider temporary difference.

I estimated OLS regression to examine two hypotheses. Regression models are as follows. I expect to see negative coefficient on real earnings management (a_1) in equation (1), which imply that firms engaged in real earnings management show significantly low effective tax rate. In addition, I expect to see the sign of estimated coefficient on real earnings management remains unchanged in equation (2). The result will support hypothesis 2 that the influence of real earnings management on tax avoidance lasts when holding accrual management constant.

$$ETR_{i,t} = a_0 + a_1 REM_{i,t} + a_2 SIZE_{i,t} + a_3 ROA_t + a_4 OCF_{i,t} + a_5 LEV_{i,t} + a_6 CAP_{i,t} + a_7 INV_{i,t} + a_8 RD_{i,t} + a_9 INT_{i,t} + a_{10} FOR_{i,t} + a_{11} NOL_{i,t} + \epsilon_{i,t} \quad (1)$$

$$ETR_{i,t} = a_0 + a_1 REM_{i,t} + a_2 MJDA_{i,t} + a_3 SIZE_{i,t} + a_4 ROA_t + a_5 OCF_{i,t} + a_6 LEV_{i,t} + a_7 CAP_{i,t} + a_8 INV_{i,t} + a_9 RD_{i,t} + a_{10} INT_{i,t} + a_{11} FOR_{i,t} + a_{12} NOL_{i,t} + \epsilon_{i,t} \quad (2)$$

I control for several variables that have been previously used in the literature, including: the natural log of total assets (SIZE), pre-tax return on assets (ROA), operating cash flow (OCF), leverage (LEV), capital intensity (CAP), inventory intensity (INV), research and development (RD), intangible assets (INT), foreign income (FOR), and a dummy indicating net operating losses (NOL).

Following Guertner(2014), SIZE is included to control for possible economies of scale related to tax planning as well as for variation in the political costs of tax planning (Gupta and Newberry 1997). The pre-tax return on assets (ROA) is included as a control for changes in book income. OCF is included to control for the operating cash position of

the firm. Leverage (LEV) is included to control for differences in tax planning opportunities related to capital structure decisions (Gupta and Newberry 1997). Capital intensive firms (CAP) have greater tax-planning opportunities related to investments in fixed assets (Stickney and McGee 1982; Gupta and Newberry 1997). Inventory intensity (INV) is also included as firms with higher inventory turnover likely have higher tax deductions related to cost of goods sold. research and development (RD) is included because much of R&D activities are tax-favored (Berger 1993). The ratio of intangible assets to total assets (INT) is included to control for possible income shifting from high- to low-tax jurisdictions (Desai and Hines 2002). Foreign income is used because firms across multinational jurisdictions are expected to have greater tax planning flexibility (Rego 2003). NOL is included to control for the effect of net operating losses on ETR.

IV. Results

4.1. Summary statistics

Table 1 presents summary statistics of the full sample in this paper. Statistics of the three REM estimators vary due to the factors they include. The mean of three REM estimations ranges from 0.38 to 0.56. Notably, median and mean of GETR are greater than those of CETR, which indicates that changes of deferred tax liability are greater than those of deferred tax asset on the average.

<Insert Table 1 here>

Table 2 Panel A shows correlation among main variables for the full sample. The estimators of REM are significantly correlated with each other, with coefficients over 0.87, and this indicates that REM estimators in this study are reliable. Also, we can see that the proxy for real earnings management and accrual management, REM and MJDA, exhibit slightly negative correlation.

Table 2 Panel B shows correlation between main variables and control variables. Total assets (SIZE), Pre-tax return on assets (ROA), changes in market value of equity (RETURNS), and operating cash flow (OCF) are positively correlated with ETR estimators. On the other hands, leverage (LEV), capital intensity (CAP), inventory intensity (INV), and R&D intensity (R&D) are positively related with effective tax rates. However, the correlation of foreign income (FOR) and net operating loss (NOL) with ETR estimators shows ambiguous implication.

<Insert Table 2 here>

4.2. Empirical results of the main regression models

In Table 3, I report estimated coefficients in equation (1). Table 3 Panel A shows results from the model in which the dependent variable is GAPP ETR, while Table 3 Panel B shows results from the model in which the dependent variable is Current ETR. The coefficients of REM are significantly negative. Specifically, firms engage more in one unit of REM show about 2% lower effective tax rates on the average, which indicates that firms engaged in real earnings management show more aggressive tax planning.

Control variables of firm size(SIZE), operating cash flows(OCF), and net operating loss(NOL) are significantly correlated with effective tax rates, and the rest of control variables shows negative impact on effective tax rates, except inventory intensity(INT). These results collectively support my hypothesis 1: *Firms that engage more in real earnings management show more aggressive tax planning*.

<Insert Table 3 here>

In Table 4, I report estimated coefficients in equation (2). Table 4 shows results from regression including discretionary accruals (DA). As in Table 3, Table 4 Panel A shows the results from the model in which the dependent variable is GAPP ETR, while Panel B shows results from the model with Current ETR. Coefficients of REM are significantly negative after holding discretionary accruals constant. The coefficients of REM are significantly negative. Specifically, firms engage more in one unit of REM show about 2.8% (1.8%) lower effective tax rates on the average based on the dependent variable of GETR in Panel A(CETR in Panel B), which implies that the influence of real earnings management on tax avoidance exists regardless of DA.

Considering that US corporate tax system follows progressive calculation, firms engage in REM and income increasing management would systematically face higher effective tax rate (at least not the *lower* effective tax rate). Nevertheless, the OLS regression shows negative coefficient on REM, which strengthens my hypothesis. These results support my hypothesis 2: *The influence of real earnings management on tax*

avoidance lasts after holding accrual management constant.

Further, the coefficients of MJDA are significantly negative, which indicates that firms may exploit DA with the feature of BT non-conforming EM. Specifically, firms engage more in one unit of accrual management show about 21% (28%) lower effective tax rates on the average based on the dependent variable of GETR in Panel A (CETR in Panel B). This figure would include not only the portion of tax avoidance but also the portion of accrual management.

<Insert Table 4 here>

V. CONCLUSION

To extend literature on the determinants of tax avoidance, this paper raised two question, (1) Do firms that engage more in real earnings management show aggressive tax planning? (2) Will the influence of real earnings management on tax avoidance last after holding accrual management constant?

Under the circumstances of divergent reporting incentives in tax and financial accounting purposes, firms may properly exploit discretionary accruals and tax subsidy for dual goals. (Kim et al. 2002). On the other hand, most of real earnings management is classified into BT Conforming earnings management, which increases both financial (i.e., book) and taxable incomes and thus has current income tax consequences.

Conesquently, firms that engage in real earnings management have relatively little chance to achieve dual reporting goals or income shifting behavior and thus would have stronger motivation to seek for actual tax planning.

Moreover, tax avoidance entails several risks such as paying additional taxes and penalties or triggering tax investigation (Hanlon and Heitzman, 2010). Thus, firms that are less sensitive to these risks of tax avoidance will be more likely to engage in aggressive tax planning. When we shift our attention to the features of earnings management, real earnings management is relatively safe from regulator scrutiny and thus from tax investigation (Roychowdhury 2006). This is backed by Dechow et al. 1996 which states that no action was initiated because of pricing or production decisions, or decisions on discretionary expenses in the list of SEC enforcement actions alleging earnings overstatements. Consequently, Firms that rely more on real earnings management are less sensitive to the risks of tax avoidance and thus more likely to engage in aggressive tax planning.

Given greater motivation and favorable circumstances for tax avoidance, I expect that firms that engage more in real earnings management seek for more aggressive tax planning. Following several prior literature on determinants of tax avoidance, I use effective tax rate (ETR) as a proxy for tax avoidance. In addition to the most renowned measure of GAAP ETR, I employ current ETR which considers temporary difference.

I estimate OLS regression to examine two hypothesis, and the results support the prediction, and the impact of real earnings management on tax avoidance remains unchanged after controlling for the discretionary accruals. Results from the OLS regression suggest that Firms engaged in real earnings management show significantly

low effective tax rate. Also, they support that the influence of real earnings management on tax avoidance lasts when holding accrual management constant, which strengthen the impact of real earnings management on tax avoidance.

The findings of this paper collectively contribute to existing accounting literature in several ways. First of all, it can provide theoretical rationales for why firms that engage more in real earnings management seek for tax avoidance in several aspects. Specifically, firms that engage more in real earnings management have greater motivation and favorable circumstances toward tax avoidance, so that those firms are expected to seek for more aggressive tax planning.

Secondly, to my knowledge, this paper is the first to examine the relation between real earnings management and tax avoidance. Accrual management has been considered in the literatures on tax avoidance, but another earnings management methods of real earnings management has not been focused. Thus, this paper can contribute to literature on the determinants of tax avoidance by suggesting REM as a shelter firm characteristic.

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Appendix: Variable Measurement

Variable	Definition	Source/ Calculation
GETR	GAPP effective tax rate	COMPUSTAT: (TXT / PI); ETR is set to 0 for firms with tax refunds and to 1 for firms with positive taxes and negative (or zero) pre-tax income
CETR	Current effective tax rate	COMPUSTAT: (TXT +TDT/ PI);
SIZE	Natural log of total assets	COMPUSTAT: Log(AT)
ROA	Pre-tax return on assets	COMPUSTAT: PI / AT
OCF	Operating cash flow	COMPUSTAT: OANCF / AT
LEV	Leverage	COMPUSTAT: DLTT / AT
CAP	Capital intensity	COMPUSTAT: PPENT / AT
INV	Inventory intensity	COMPUSTAT: 365 / inventory turnover; where inventory turnover is equal to COGS / inventory
RD	R&D intensity	COMPUSTAT: XRD / SALE
INT	Intangible assets	COMPUSTAT: INTAN / AT
FOR	Foreign income	COMPUSTAT: PIFO / AT
NOL	Net operating losses	COMPUSTAT: 1 if TLCF > 0, and 0 otherwise

Table1. Descriptive statistics

Summary statistics for all variables used in this paper.

The descriptions of the variables are provided in Appendix A. The sample period covers 1997 through 2014 for all variables. The number of observations for each variable varies due to data availability.

	Mean	Median	Standard deviation	Minimum	Maximum
GETR	0.271	0.195	0.329	0.0	1.0
CETR	0.173	0.000	0.324	0.0	1.0
REM1	0.563	0.296	1.472	0.0	50.716
REM2	0.376	0.174	1.172	0.0	47.225
REM	0.469	0.259	1.145	0.0	47.319
SIZE	4.729	4.816	2.732	-6.908	13.59
ROA	-1.975	0.010	134.215	-29700.5	1208.0
OCF	-0.287	0.047	11.286	-735.000	3024.0
LEV	0.340	0.063	13.442	-0.035	3287.0
CAP	0.280	0.186	0.265	0.0	1.157
INV	5738.590	71.710	717123.13	-5338.720	14569282800
RD	0.523	0.0	16.727	-0.198	2274.0
INT	0.133	0.039	0.189	-0.042	1.0
FOR	-0.006	0.011	1.055	-135.231	41.582
NOL	0.468	0.0	0.499	0.0	1.0

Table2.

Penal A. Correlation among main variables

	GETR	CETR	REM1	REM2	REM3	MJDA
GETR						
CETR	0.4923					
REM1	-0.0586	-0.0416				
REM2	-0.0549	-0.0399	0.8917			
REM3	-0.0451	-0.0281	0.8749	0.9489		
MJDA	-0.0419	-0.0285	-0.0083	-0.0415	-0.0124	

This table reports pooled Pearson correlations for the entire sample of 18,643 firm-years over the period 1997−2014. Please see Appendix for variable descriptions.

Penal B. Correlation between main variables and control variables

	GETR	CETR
SIZE	0.13861	0.16390
ROA	0.09362	0.09315
OCF	0.00677	0.00538
LEV	-0.00626	-0.00640
CAP	-0.04514	-0.12645
INV	-0.01442	-0.00957
RD	-0.01089	-0.00214
INT	0.08010	0.00089
FOR	-0.00100	0.00574
NOL	-0.00611	0.06645

This table reports pooled Pearson correlations for the entire sample of 18,643 firm-years over the period 1997−2014. Please see Appendix for variable descriptions.

Table3. OLS results of main model

Panel A.

	Dep. Variable =Current ETR		
	(1)	(2)	(3)
Intercept	0.310***	0.286***	0.306***
	(0.010)	(0.010)	(0.010)
REM	-0.019***	-0.020**	-0.009
	(0.006)	(0.009)	(0.007)
SIZE	0.029***	0.031***	0.029***
	(0.001)	(0.001)	(0.002)
ROA	-0.205***	-0.166***	-0.201***
	(0.016)	(0.014)	(0.016)
OCF	0.084***	0.035***	0.085***
	(0.014)	(0.008)	(0.014)
LEV	-0.038***	-0.034***	-0.038***
	(0.013)	(0.012)	(0.013)
CAP	-0.517***	-0.506***	-0.516***
	(0.017)	(0.016)	(0.017)
INV	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
RD	-0.002***	-0.002***	-0.002***
	(0.001)	(0.001)	(0.001)
INT	-0.480***	-0.465***	-0.481***
	(0.017)	(0.017)	(0.018)
FOR	-0.009	-0.060***	-0.010
	(0.020)	(0.015)	(0.020)
NOL	0.046***	0.047***	0.046***
	(0.005)	(0.005)	(0.005)

The descriptions of the variables are provided in Appendix A. Coefficients marked with *, **, and *** are significant at 10%, 5%, and 1%, respectively.

Three different REM estimators, REM1, REM2, REM3 were included in Model (1) through (3) each.

Panel B.

	Dep. Variable =GAAP ETR		
	(1)	(2)	(3)
Intercept	0.364***	0.358***	0.360***
	(0.008)	(0.008)	(0.009)
REM	-0.030***	-0.029***	-0.017***
	(0.005)	(0.007)	(0.006)
SIZE	-0.002*	-0.002	-0.002**
	(0.001)	(0.001)	(0.001)
ROA	-0.287***	-0.241***	-0.282***
	(0.014)	(0.012)	(0.014)
OCF	0.087***	0.044***	0.089***
	(0.012)	(0.007)	(0.012)
LEV	-0.024**	-0.019*	-0.024**
	(0.011)	(0.010)	(0.011)
CAP	-0.030**	-0.033**	-0.029**
	(0.014)	(0.014)	(0.014)
INV	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
RD	-0.003***	-0.002***	-0.003***
	(0.000)	(0.000)	(0.000)
INT	0.035**	0.037***	0.033**
	(0.014)	(0.014)	(0.015)
FOR	-0.025	-0.068***	-0.026
	(0.017)	(0.013)	(0.017)
NOL	0.003	0.003	0.003
	(0.004)	(0.004)	(0.004)

The descriptions of the variables are provided in Appendix A. Coefficients marked with *, **, and *** are significant at 10%, 5%, and 1%, respectively.

Three different REM estimators, REM1, REM2, REM3 were included in Model (1) through (3) each.

Table 4. OLS results of additional model

Panel A.

	Dep. Variable =GAAP ETR		
	(1)	(2)	(3)
Intercept	0.367***	0.362***	0.364***
	(0.008)	(0.008)	(0.009)
REM	-0.028***	-0.028***	-0.016***
	(0.005)	(0.007)	(0.006)
MJDA	-0.218***	-0.201***	-0.223***
	(0.029)	(0.027)	(0.029)
SIZE	-0.002*	-0.002	-0.003**
	(0.001)	(0.001)	(0.001)
ROA	-0.264***	-0.223***	-0.259***
	(0.014)	(0.012)	(0.014)
OCF	0.075***	0.038***	0.076***
	(0.012)	(0.007)	(0.012)
LEV	-0.021**	-0.016	-0.021**
	(0.011)	(0.010)	(0.011)
CAP	-0.034**	-0.037***	-0.033**
	(0.014)	(0.014)	(0.014)
RD	-0.003***	-0.002***	-0.003***
	(0.000)	(0.000)	(0.000)
INT	0.029**	0.032**	0.026*
	(0.014)	(0.014)	(0.015)
FOR	-0.026	-0.060***	-0.026
	(0.017)	(0.013)	(0.017)
NOL	0.002	0.002	0.002
	(0.004)	(0.004)	0.004)

The descriptions of the variables are provided in Appendix A. Coefficients marked with *, **, and *** are significant at 10%, 5%, and 1%, respectively.

Three different REM estimators, REM1, REM2, REM3 were included in Model (1) through (3) each.

Panel B.

	Dep. Variable = Current ETR		
	(1)	(2)	(3)
Intercept	0.315***	0.291***	0.312***
	(0.010)	(0.010)	(0.010)
REM	-0.017***	-0.018**	-0.008
	(0.006)	(0.009)	(0.007)
MJDA	-0.294***	-0.273***	-0.297***
	(0.034)	(0.032)	(0.034)
SIZE	0.029***	0.031***	0.028***
	(0.001)	(0.001)	(0.001)
ROA	-0.174***	-0.142***	-0.170***
	(0.017)	(0.014)	(0.017)
OCF	0.068***	0.027***	0.069***
	(0.014)	(0.008)	(0.014)
LEV	-0.034***	-0.030***	-0.034***
	(0.013)	(0.012)	(0.013)
CAP	-0.523***	-0.511***	-0.522***
	(0.017)	(0.016)	(0.017)
RD	-0.002***	-0.002***	-0.002***
	(0.001)	(0.001)	(0.001)
INT	-0.488***	-0.473***	-0.490***
	(0.017)	(0.017)	(0.018)
FOR	-0.010	-0.050***	-0.011
	(0.020)	(0.015)	(0.020)
NOL	0.045***	0.046***	0.045***
	(0.005)	(0.005)	(0.005)

The descriptions of the variables are provided in Appendix A. Coefficients marked with *, **, and *** are significant at 10%, 5%, and 1%, respectively.

Three different REM estimators, REM1, REM2, REM3 were included in Model (1) through (3) each.

국문초록

본 연구는 실제영업활동을 통한 이익조정을 기업간 조세회피 수준에 영향을 미치는 기업특성변수로서 예상했고 이를 실증적으로 검증하였다. 보고이익 결정 시 기업은 재무보고와 세무보고 목적 상의 상충관계에 직면하는데, 재량적 발생액을 이용하면 과세소득을 증가시키지 않고 이익을 증가시킬 수 있는 가능성이 있다. 반면 실제영업활동을 통한 이익조정은 재무보고 및 세무보고의 이중목적을 달성하기 어렵기 때문에, 실제영업활동을 통해 이익을 상향 조정할 경우 공격적으로 조세회피 전략을 세우는 동기가 있다고 할 수 있다. 더불어 선행연구에 따르면 실제이익조정은 발생액 이익조정과 비교해 과세당국으로부터의 합법성 여부에 대한 적발 가능성이 낮다. 따라서 실제이익조정을 하는 기업은 조세회피에 수반되는 위험으로부터 덜 민감하므로, 더욱 적극적으로 조세회피를 할 수 있는 환경에 놓이게 된다. 본 연구는 1997년부터 2014년까지의 일반 기업을 대상으로 실증분석을 실시하였다. 조세회피 추정치는 GAAP 유효세율 및 당기 유효세율로 측정하였고, 실제이익조정 추정치는 비정상 영업현금흐름·재량적 지출·생산비용을 결합해 측정하였다. 본 연구 결과에 따르면, 실제이익조정과 조세회피는 유의적인 음의 관련성이 관찰되어, 실제영업활동을 통한 이익조정을 많이 하는 경우 조세회피를 많이 하는 것을 알 수 있었다. 더불어 실제 및 발생액 이익조정의 정도에 대한 관계를 주장하는 선행연구를 고려하여 재량적 발생액을 통제한 이후에도, 실증결과는 실제이익조정이 조세회피 정도에 영향을 미친다는 가설을 지지하였다. 발생액 이익조정과 조세회피간의 고려는 국내외로 활발하게 이루어지고 있으나, 또 다른 이익조정 수단으로서의 실제이익조정과 조세회피 수준간의 연구는 드물다. 이 점을 고려할 때, 본 연구는 실제이익조정이 기업의 조세회피행위에 영향을 미친다는 것을 발견하였다는 것에 그 의의가 있다.

주요어: 조세회피, 실제영업활동을 통한 이익조정, 발생액 이익조정, 유효세율

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